

# CREATING A LIVABLE CORRIDOR



ideas for SR 520



*the TRANS-LAKE WASHINGTON PROJECT*

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**Washington State Department of Transportation**

*TRANS-LAKE WASHINGTON PROJECT*

September 2002



# Introduction

This workbook is a primer on highway structures and landscapes that can help make communities with highways more livable. Five chapters present basic technical information on new trends in highway landscape enhancements and case studies from communities throughout the United States. Each chapter includes a map showing some locations within the SR 520 corridor where similar “livable corridor” enhancements could be considered. Each chapter also provides a list of references for more information.



SR 520 corridor near 124th in Bellevue



Bike-pedestrian trail along I-90, Mercer Island.

Why this book?

The main reason is to demonstrate that a “livable highway corridor” is not an oxymoron. A livable corridor is achievable -- communities around the world are creating roadside landscapes, art, and technologies that lessen the impact of the highway on nearby environments and communities. Creating a livable corridor is a new process. It is a complicated balancing of aesthetic and cultural values, engineering capabilities, and economic realities.

These new landscapes and technologies have special vocabularies and require some introduction, some explanation. If we share a common knowledge base we - the jurisdictions, neighbors, corridor planners and highway engineers - can communicate more effectively with one another. It is our hope that this workbook will inspire discussion and clear communication so that together we can create ideas for making our own highway corridors more livable.



the TRANS-LAKE WASHINGTON PROJECT

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# LANDSCAPE ENHANCEMENT

In the transportation world, **enhancement** is not the same as mitigation.

**Landscape Enhancement** encompasses a suite of improvements that can add lasting value to a community. Enhancement projects are voluntary, collaborative efforts, the inspiration for which arises out of a community's expressed desire to reinforce the environmental, scenic, aesthetic, historic and/or natural resource values of the area.

**Mitigation** is a required action and is controlled by state and federal regulatory agencies. Mitigation is the effort to avoid or minimize impacts and, where impact is unavoidable, to compensate for the impacts. Noise walls are mitigation measures, whereas lids and noise wall art are enhancements.



Top: Bear Creek Trail, Redmond, SR 520  
Mid: Visitor Information Center sign,  
Olympic Peninsula  
Bottom: Deer sculpture, Kirkland  
Facing: I-90 on Mercer Island



The scope of landscape enhancement possibilities is broad, ranging from the large scale, such as rails-to-trails conversions, to the small scale, such as site furnishings and lighting. Some categories and examples of enhancement are presented on the pages that follow....

### ***Pedestrian and bicycle facilities***

- Sidewalks, curb ramps, parking, racks
- Lane striping, wide paved shoulders
- Off-road trails, bridges, underpasses

### ***Scenic or historic highway programs***

- Turnouts and overlooks
- Visitor centers and viewing areas
- Designation signs and markers

### ***Landscaping and scenic beautification***

- Street furniture, lighting, public art and landscaping along streets
- Historic highways
- Trails and interstate highways
- Waterfronts and gateways

### ***Scenic or historic vistas, landscapes or buildings***

- Acquisition of properties

### ***Archaeological sites***

- Planning and research
- Preservation and interpretation

### ***Rehabilitation and operation of historic facilities***

- Depots, bus stations and lighthouses
- Rail trestles, tunnels and bridges

### ***Control of outdoor advertising***



Top: Dragon in Seattle International District  
Right: Overlook from Island Crest Way lid (Mercer Island)



Montlake Bridge spanning the Montlake Cut



Lakewalk along I-35 lid in Duluth, Minnesota



Top: Rose Garden on lid in Duluth, MN  
Middle: Burke-Gilman Trail, Seattle  
Bottom: Clyde Hill Gateway

# CONTEXT SENSITIVE DESIGN

Over the last twenty years a movement has gathered support to promote the inclusion of landscape enhancements as a core part of highway corridor design. Under the title of “Context Sensitive Design” proponents developed a set of guidelines and practices that encourage flexibility and excellence in engineering design. The over-arching goal is to balance economic, social and environmental objectives. The essential characteristics and criteria for context sensitive design as adopted by the Federal Highway Administration (FHWA) are summarized in the box on the facing page.

These principles build on the **Highway Beautification Act** of 1965 (enacted to control billboards and reverse the uglification of our national highway system) and the **National Environmental Policy Act** of 1969, which advocates “safe, healthful, productive, and aesthetically and culturally pleasant surroundings.”

*Can you find the freeway in this photo?*



Park and playground on top of the Mercer Lid's western portal

...it's under the park.

### ***“Excellence” means that a transportation design...***

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- ❖ Satisfies the project’s purpose and need agreed to by a full range of stakeholders. This agreement is forged in the earliest phase of the project and amended as needed as the project develops.
- ❖ Provides a safe facility for both the user and the community.
- ❖ Is in harmony with the community and preserves environmental, scenic, aesthetic, historic, and natural resource values of the area.
- ❖ Exceeds the expectations of both designers and stakeholders and achieves a level of excellence in people’s minds.
- ❖ Involves efficient and effective use of the resources (time, budget, community) of all involved parties.
- ❖ Can be designed and built with minimal disruption to the community.
- ❖ Adds lasting value to the community.

### ***Characteristics of the process contributing to excellence***

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- ❖ Communication with all stakeholders is open, honest, early, and continuous.
- ❖ A multi-disciplinary team is established early, and includes the public.
- ❖ A full range of stakeholders is involved with transportation officials in the scoping phase. The purposes of the project are clearly defined, and consensus on the scope is forged before proceeding.
- ❖ The highway development process is tailored to meet the circumstances and should examine multiple alternatives to achieve a consensus.
- ❖ Top agency officials and local leaders are committed to the process.
- ❖ Public involvement is tailored to the project.
- ❖ The landscape, the community, and valued resources are understood before engineering design is started.
- ❖ A full range of tools for communication about project alternatives is used (e.g., visualization).

## REFERENCES

Federal Highway Administration website for information on context sensitive design and other related links:

[www.fhwa.dot.gov/csd](http://www.fhwa.dot.gov/csd)

*Noise Mitigation and Design Options*, WSDOT, April 21, 2001.

# NOISE WALLS

**Noise Walls** are sound barriers installed along roadways, between noise sources and noise receivers, to reduce transportation noise in the immediate vicinity of the roadway. These walls reduce noise outside the roadway primarily by reflecting sound back or upward, or by partially absorbing it. The first noise wall was built in 1968 in California and the federal government adopted noise barrier regulations four years later. Over 1,300 miles of noise walls have been built in the U.S., and they are used widely in Europe as well.

Communities are discovering that these walls can serve as backdrops for landscaping and art, which helps make the walls less visually monotonous and monolithic.



Pima Expressway, Phoenix, Arizona

Mercer Island noise wall between street and residences

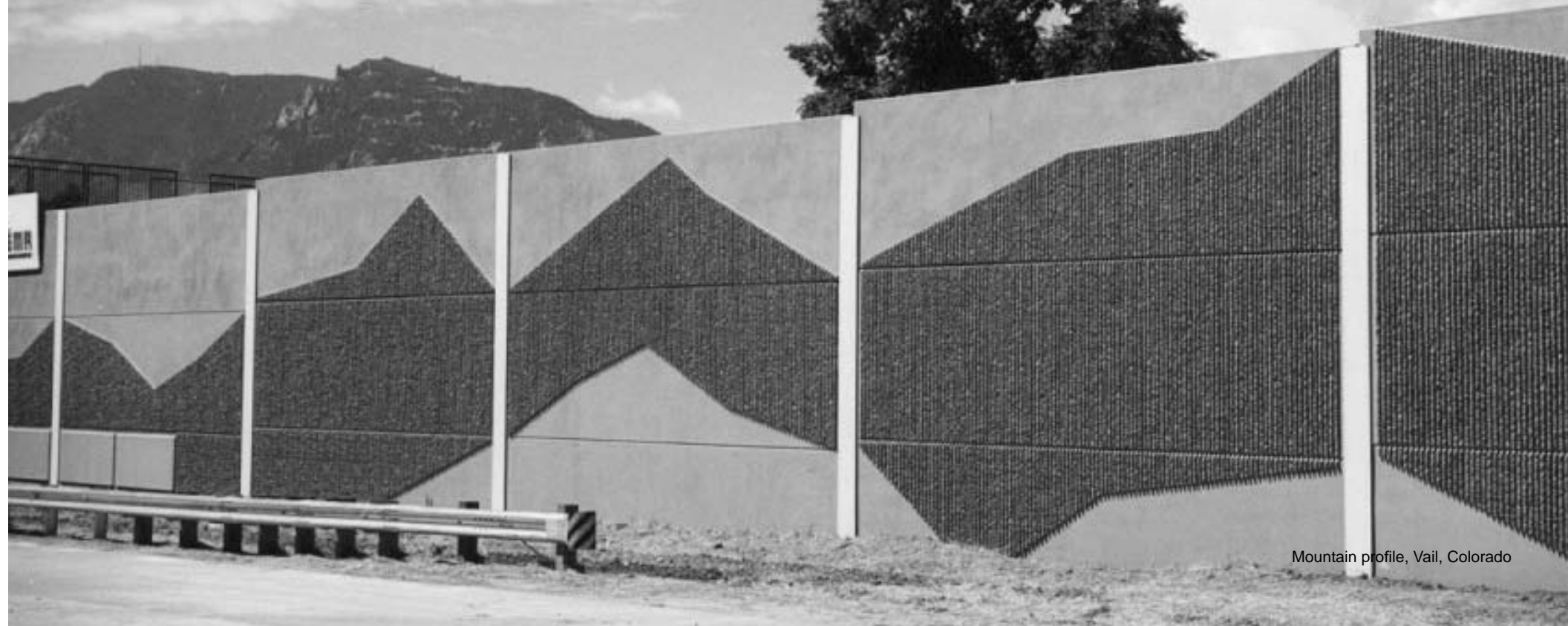


Noise walls are not a silver bullet. Walls that block noise also block views, wind, and sunlight. They can loom, slab-sided, in a neighborhood, dividing and disconnecting. Nor are they necessarily a bonus for drivers either. Driving along a beautiful scenic route is a pleasant, relaxing experience, but driving along long stretches of blank walls that block views has been shown to increase drivers' stress.



## ***ABOUT NOISE MITIGATION***

- Noise mitigation is considered for highway projects that result in noise levels that are greater than existed prior to completion of the project or that exceed established thresholds.
- Projects that trigger this consideration are new highway facilities and roadways, and upgraded or improved highways with changes in traffic alignment or additional travel lanes.
- Existing land use determines the noise impact criteria level for highway projects—not the land use zoning.
- The intent of the regulations is to protect sensitive receivers such as hospitals, schools and residences near highways.
- The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) categorize land use differently, but both FHWA/WSDOT and FTA noise regulations use existing noise levels and/or established thresholds to determine noise impacts.
- The existing noise environment is established through a combination of on-site noise monitoring, noise-level modeling and data from other sources.
- For maximum noise reduction, the barriers are either placed close to the receiver, or close to the noise source (roadway).

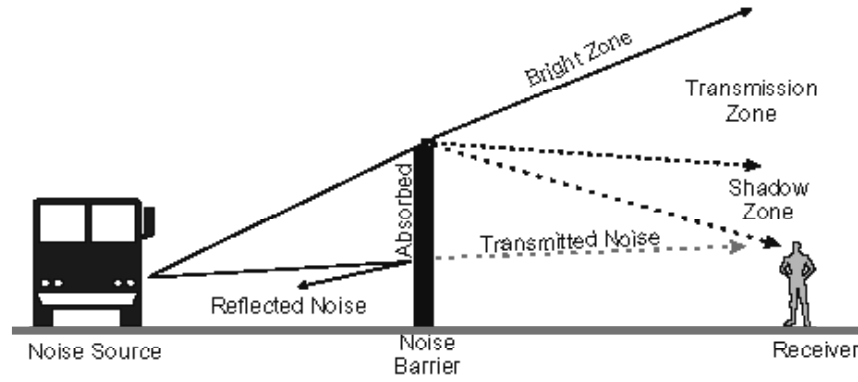


Mountain profile, Vail, Colorado

## SOURCES

There are several important parameters to consider when designing noise walls, including

- noise source type
- distance and elevation of the noise receiver relative to the noise source
- horizontal and vertical wall placement
- wall material



Sound waves can bend around corners [diffract] and scatter [reflect] into new paths. Because of this the barrier should be located as close as possible to either the source or the receiver.

For every 3 feet of height above the line of sight, a plain concrete noise wall reduces the noise by about 1.5 db.

In comparison, a 100-foot wide band of trees and understory shrubs reduces noise by 3-5 db.

*Noise is generated at different places on the vehicle, therefore the height of the “effective” noise source is different for each vehicle type.*

### PASSENGER VEHICLES



Noise occurs mainly at the tire or wheel-roadway interface, or from 0 to 2 feet above ground.

### MEDIUM TRUCKS

Delivery trucks, large SUVs, buses with under-vehicle exhaust, etc.



Noise is produced by a combination of tire-roadway interface and engine exhaust. The equivalent noise source is from 2 to 5 feet above ground.

### HEAVY TRUCKS

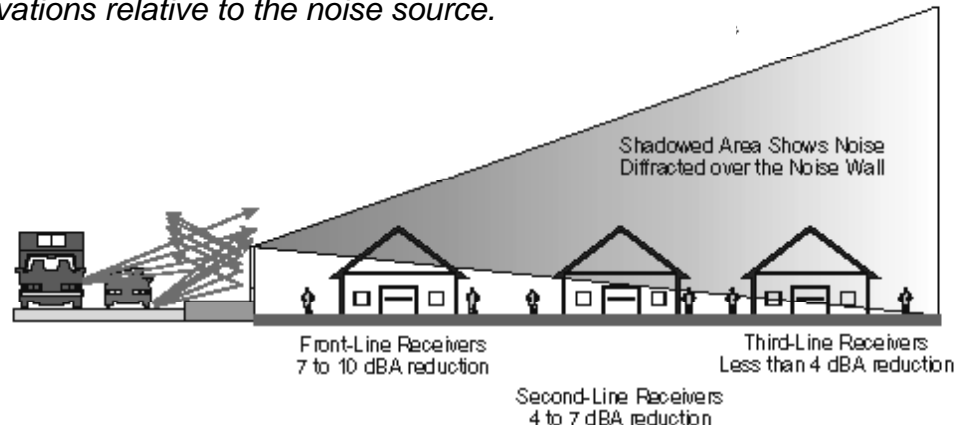
Long-haul tractor-trailers, dump and cement trucks, e.g.



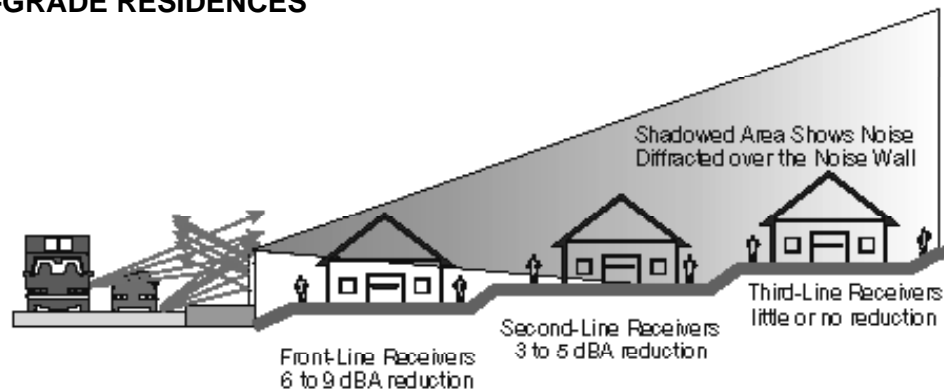
Noise is produced by a combination of tire-roadway interface, engine, and exhaust noise, resulting in an average noise source that is approximately 8 feet above ground.

# WALL HEIGHT, ELEVATION AND DISTANCE

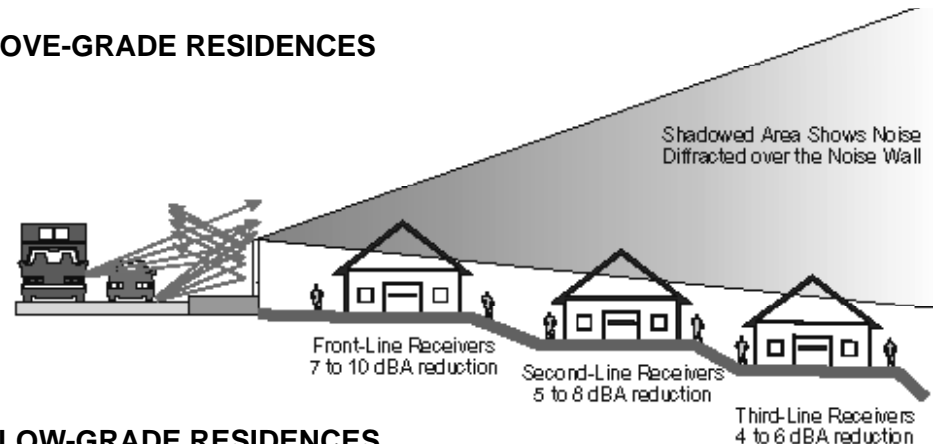
*These diagrams show how sound travels to receivers that are at different distances and elevations relative to the noise source.*



## AT-GRADE RESIDENCES



## ABOVE-GRADE RESIDENCES



## BELOW-GRADE RESIDENCES

### Typical sound wall heights for at-grade residences:

- 8-10' for roads with primarily passenger vehicle traffic
- 10-12' for major arterial roads and minor highways with some heavy truck traffic
- 12-14' for major highways with a high level of heavy truck traffic

### Typical heights for above-grade residences:

- 10-12' for roads with primarily passenger vehicle traffic
- 12-14' for major arterial roads and minor highways with some heavy truck traffic
- 14-16' for major highways with a high level of heavy truck traffic

### Typical heights for below-grade residences:

- 6-8' for roads with primarily passenger vehicle traffic
- 8-10' for major arterial roads and minor highways with some heavy truck traffic
- 10-12' for major highways with a high level of heavy truck traffic

## MATERIALS & APPEARANCE

Noise walls can be made of almost any construction material: concrete, brick and masonry, metal, wood, plastic. However, they are usually made from concrete due to its affordable price, availability, and ease of maintenance.

Right: Green plastic lattice on concrete wall; Connecticut (FHWA)



Left: Random-board pattern of Mercer Lid , I-90

Below: Tile plus textured and pigmented concrete (Scott System, Inc.; Vail, Colorado)



Above: Residential side of I-25 in Vail, Colorado (Scott System, Inc.)



# TEXTURES

Random-board pattern of I-90 corridor



Blackhawk stone pattern  
(Scott System, Inc.)

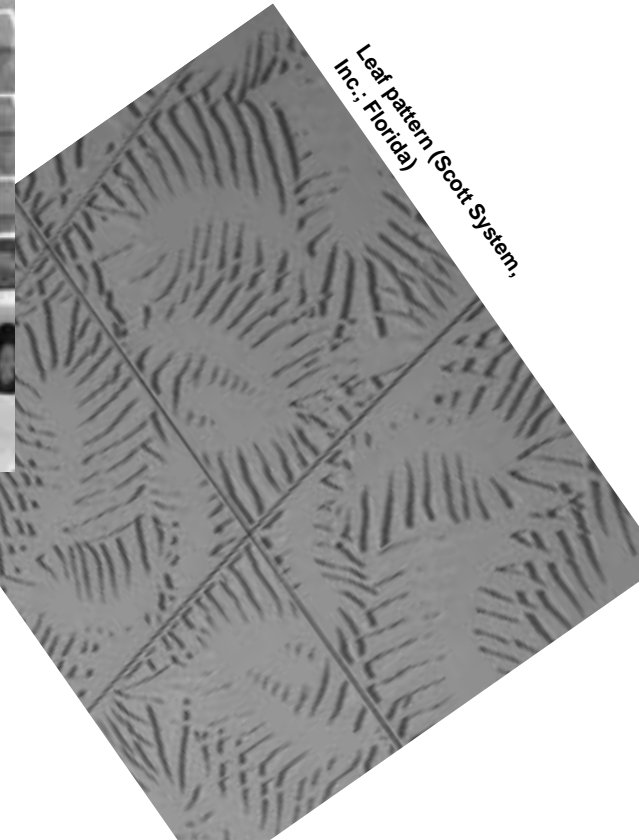


Fish and shells design  
(V. Scurri, Seattle)



Rough stone pattern  
(FHWA; California)

Leaf pattern (Scott System,  
Inc.; Florida)



Leaf patterns from I-90  
walls, east of Issaquah



## ART

Communities are collaborating with artists to create imaginative noise wall art that also expresses community character. Not only is the highway side more interesting for the driver, but the residential side can be attractive for the community.

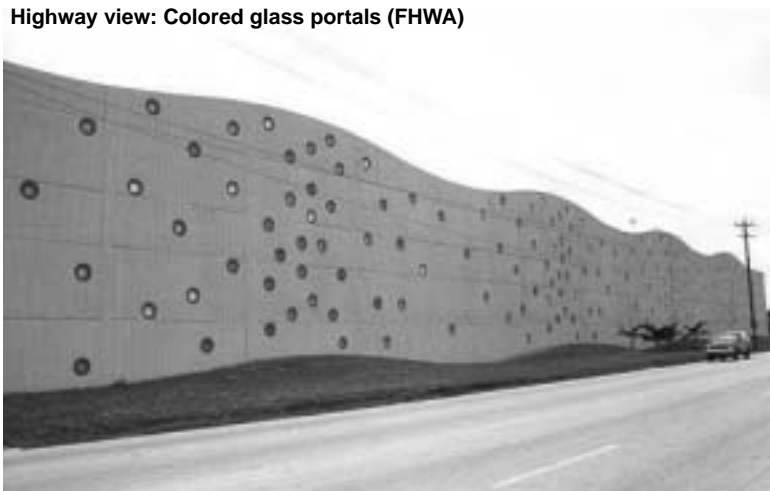


Neighborhood view: Brick veneer (FHWA)

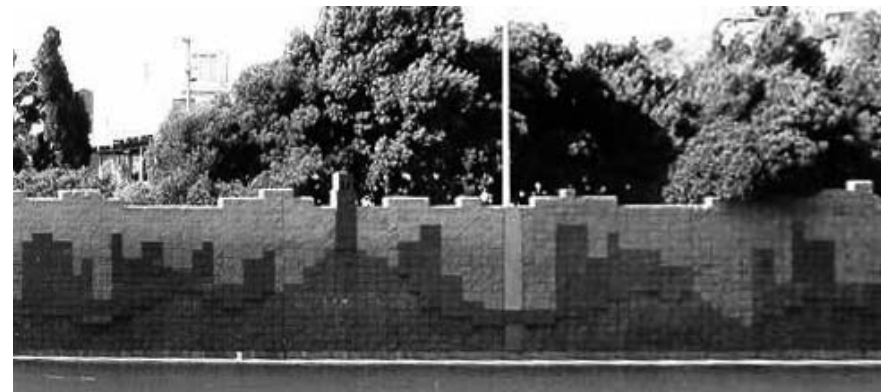


Residence view: Stained concrete wall (FHWA)

Highway view: Colored glass portals (FHWA)



Highway view: Rough stone and pigment "skyline" (FHWA)





**CASE STUDY: WALL CYCLE TO OCOTILLO**  
Phoenix, Arizona

The *Wall Cycle to Ocotillo* is a 20-site, 35-piece sculpture, landscape and urban design project along a five-mile stretch of the new Squaw Peak Parkway. The City of Phoenix Arts Commission and Planning Department worked with artists Mags Harries and Lajos Heder to develop the sculptures that resemble vessels. The 'vessels' are placed along the 10 to 14 foot concrete noise wall separating the highway from the residential neighborhoods.

The sculptures are made of polychromed concrete and painted steel. They are 2 to 15 feet high and are illuminated by photoelectric solar power. The "Acoustic Vessels" along the canals have evaporative cooling over the benches and solar-powered interior water systems that create water sounds.



**Gold Guardian**



**Giant Vessel  
Pedestrian Under-  
pass**



**Blue Gazebo**



## **CASE STUDY: *PIMA EXPRESSWAY*** Scottsdale, Arizona

The ***Pima Expressway*** is an 8-mile work of noise wall art. The City of Scottsdale teamed with an artist, landscape architect and architect to create the textures and lizard and cactus images for the walls and overpass piers. Colors and motif were inspired by the art, desert color, and themes of the area.

The noise barriers are 20 to 60 feet high and each panel is unique. The new technology of elastomeric formliners makes it possible to layer the liners in different combinations for different effects, without having to create a new formliner for each panel.

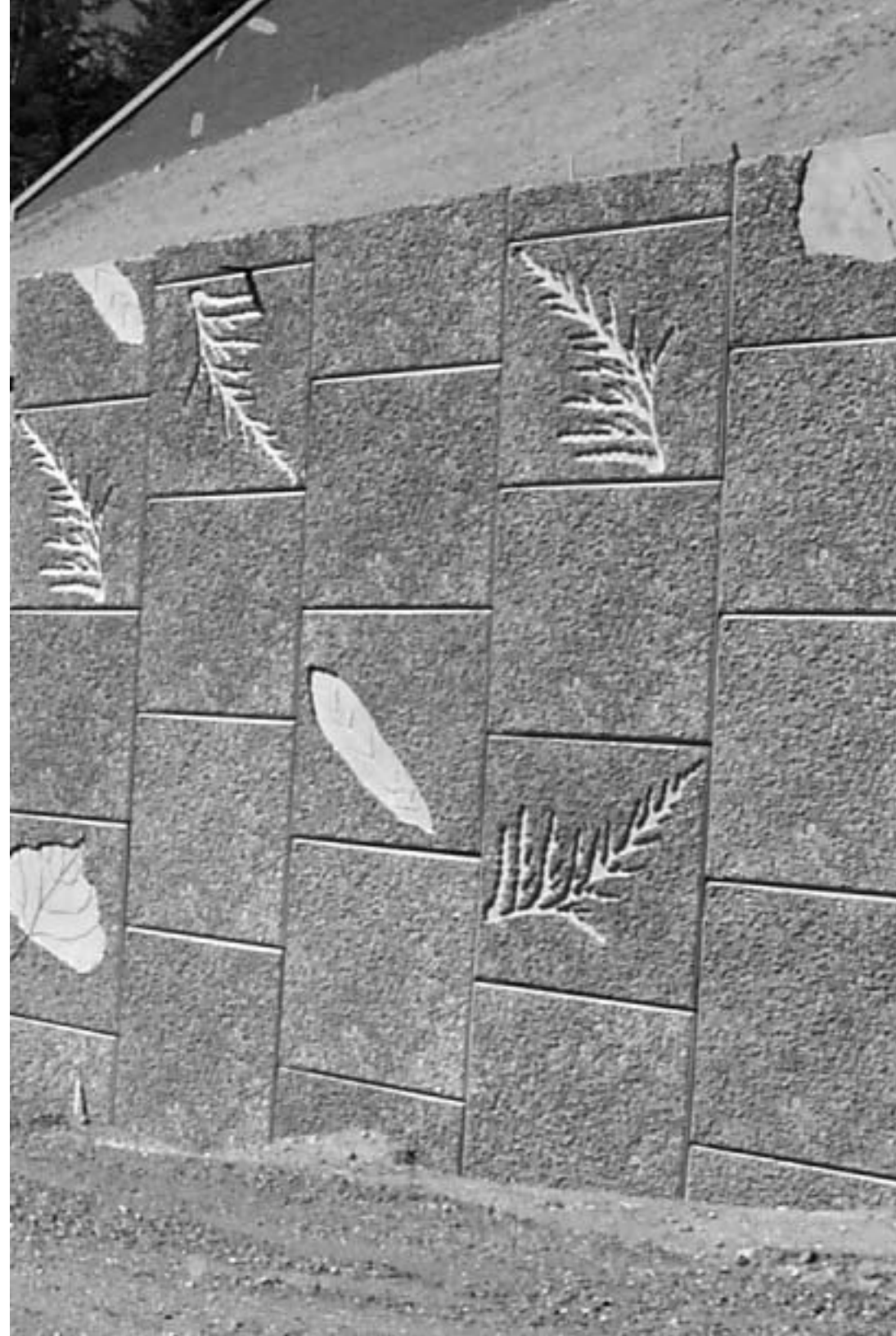


**CASE STUDY: INTERSTATE 90**  
Issaquah, Washington

**Interstate 90** runs eastward from Seattle and illustrates a coherent corridor aesthetic theme. WSDOT teamed with a local artist to create the “Forest Patterns”, a collection of leaf and seed patterns that are impressed into the concrete retaining and noise walls along the interstate. The patterns are based on those of trees native to the Cascade Mountains - Poplar, Cedar, Willow, and the Douglas Fir seed - to reflect the texture of the forests through which the interstate passes.



Artist - Peggy Gaynor



## LOCATOR MAP

This map shows locations within the SR 520 corridor where sound walls may be considered.



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Washington State Administrative Code (WAC), Chapter 173-60, Maximum Environmental Noise Levels.

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Washington Department of Transportation, *Noise Mitigation and Design Options*, April 21, 2001.

*Erosion wall in Virginia  
(Scott System, Inc.)*

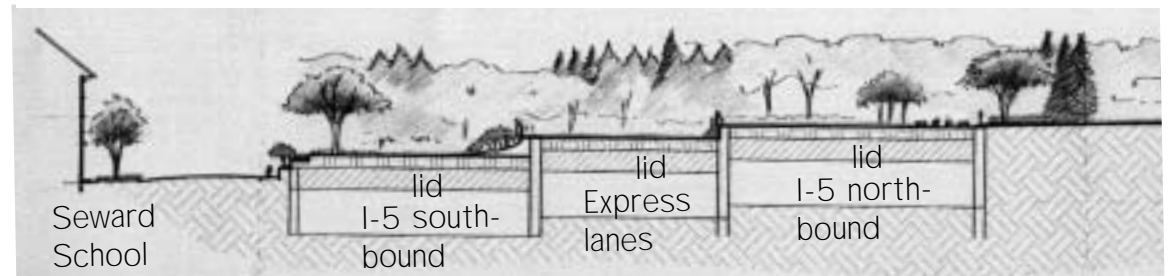


# LIDDED HIGHWAYS

# Lids Bridges Expanded Bridges

A roadway covered by a bridge-like structure is variously called a lidded highway, a capped highway, or a cut-and-cover tunnel. The “lid” is the cover on the tunnel and is also shorthand for these cut-and-cover structures.

Lidded highways are a new landscape enhancement, introduced within the last 25 years. Just three cities in the U.S. have used them (Duluth, Phoenix, Seattle), but more are starting to plan for or construct them now (Portland, Boston, Dallas, Vail) because lids can reconnect neighborhoods and provide safe access to important open spaces, such as shorelines.



Sectional drawing of possible lids over I-5 at SR 520 interchange (Wessman)



Mercer Island lids, expanded bridges and bridges

## Bridge

Lidded highways are basically bridges built portal-to-portal and end-to-end. If the structure is less than about 100 feet long it is generally considered to be a bridge.

## Expanded Bridge

Structures in the 100 to 350 foot long range are “expanded” bridges and have enough room for shared bike-pedestrian trails and landscape buffers between pedestrian and traffic lanes.

## Lidded Highway

Lid lengths range from 350 feet to two or three thousand feet portal-to-portal. They can serve multiple purposes because there is room for landscape features such as parks.

# STRUCTURE

Lids can be constructed to support heavy loads, such as soil and landscaping for parks and open spaces, trails and roads.

For highway lids, the lid or cap has about 8 feet of bridge superstructure. There can be up to 11 feet more for landscaping support. On top of this, the soil layer can be another 2 to 8 feet deep.



View from Seward Elementary School



Computer simulated lid surfaces.



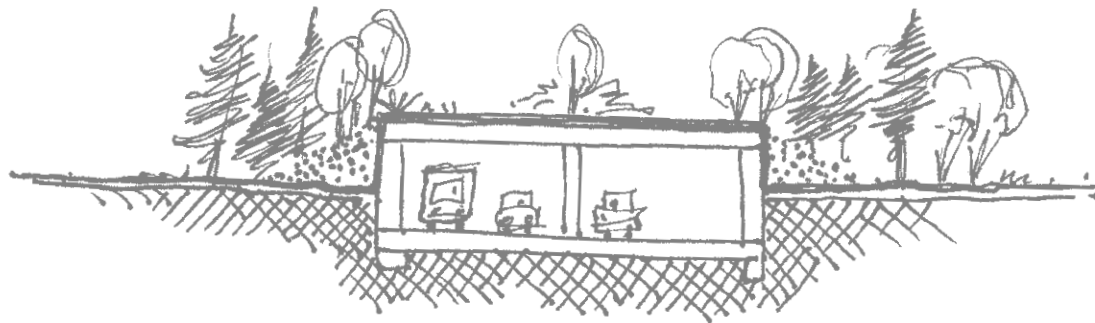
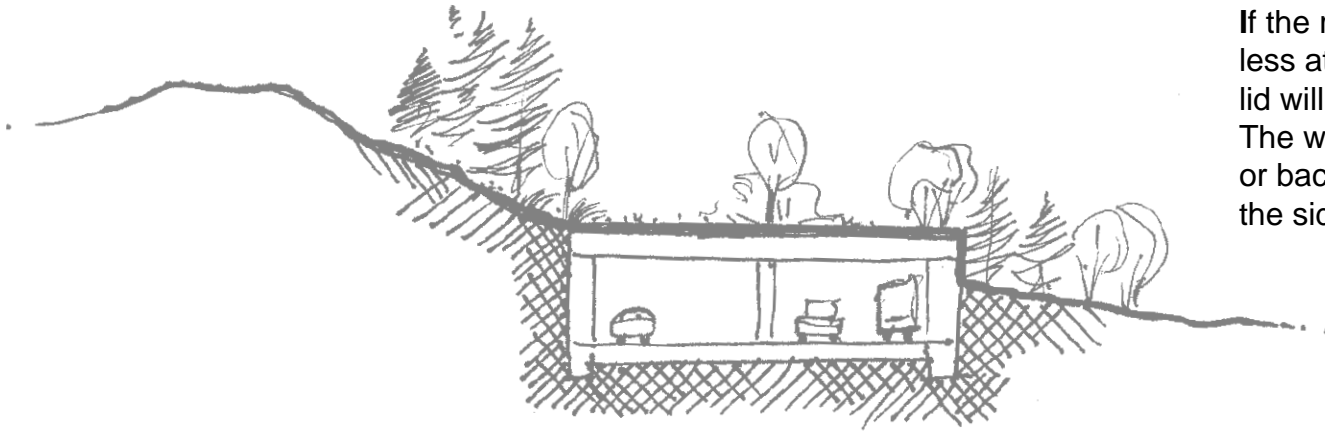
One possible landscape.

The photograph simulations to the right show the transformation of an unlidded highway to a lidded one. The view is from the Seward Elementary School on Boylston Avenue in Seattle looking eastward across I-5 toward Roanoke and the SR 520 ramps.

# TOPOGRAPHY

Topography is the primary factor that determines the form of the lid. Form drives cost. If the roadbed is naturally lower, or can be easily placed lower than the surroundings, the lid may span the adjacent slopes and directly connect the landscapes and communities across the highway.

If the roadbed and topography are more or less at the same level, the outer walls of the lid will rise above the surroundings, exposed. The walls can be screened by landscaping or backfilled in certain cases to cover part of the side walls.





# SAFETY

Lids longer than about 500 feet generally require ventilation, fire suppression materials, and emergency and maintenance vehicle access, just as tunnels do. The safety equipment that must be accommodated in the lid and its walls includes water and foam for fire suppression, high-power fans, monitors, sensors, and communications. All of these require maintenance, as do the roadway and lid super-structure. This equipment plus the access to it can add 10 to 30 feet to the lid thickness.

There are two criteria that determine ventilation requirements for a given length of lid:

1. Vehicular emissions concentrations must be kept below established ambient air quality standards. This depends on how much traffic moves through the tunnel.
2. Smoke and fumes from a fire in the tunnel must be removed (quickly) to protect motorists.

The ventilation system for the Mercer lid (I-90) has a 30-foot high fan room above the roadway. Here, the lid of the fan room is landscaped, has picnic tables and tennis courts, and is on the bike trail.



# NOISE

Lids are very effective at blocking highway noise -- for the length of the lid. However, noise levels near the lid's portals can be higher than if the lid were not there. This amplification is caused by noise rattling around inside the lid until it escapes at the portal. One solution for reducing noise here is to erect noise walls that extend from the portal, as in the photo below of the eastern portal of the Mercer lid.



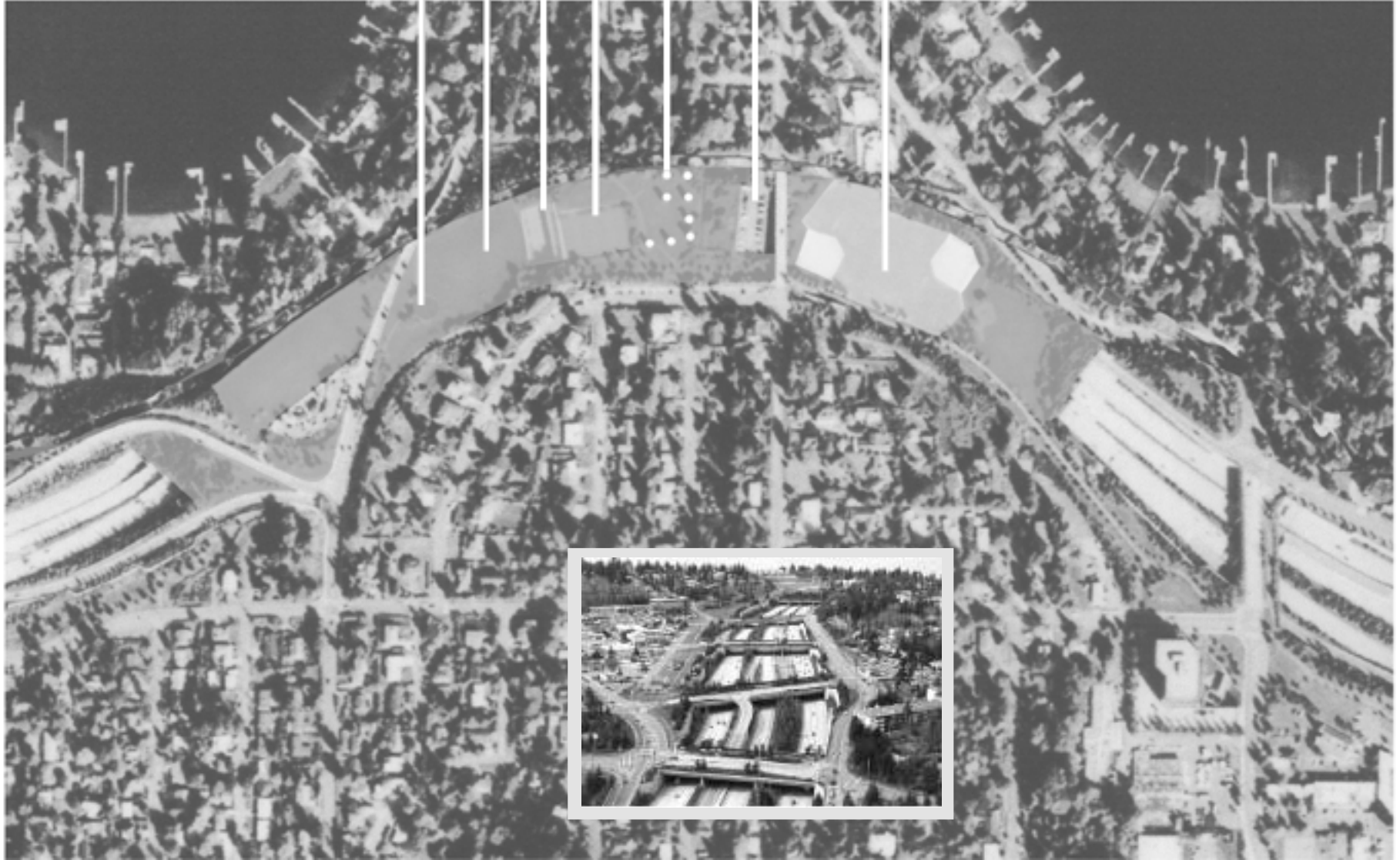
## ***CASE STUDY: MERCER ISLAND, WASHINGTON***

- Portion of I-90
- Constructed in 1987-1992
- Continuous 2800 feet long
- Lid supports recreational field, tennis courts, basketball courts, parks
- Full ventilation and fire suppression system





Play equipment  
Park  
Basketball  
Tennis  
Vents  
Building  
Play fields

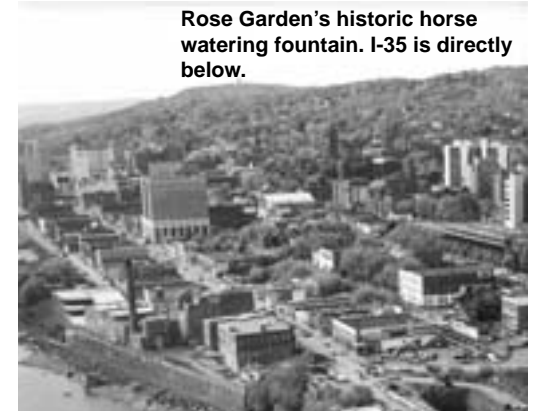


## CASE STUDY: DULUTH, MINNESOTA

- Segment of I-35 through downtown
- Constructed in 1983 -1992
- Has won multiple Federal Highway Administration Excellence Awards creating a more pleasing highway experience.
- Four lids within 13 blocks of downtown Duluth-
  - #1 = 725 ' long
  - #2 = 650' long
  - #3 = 570' long
  - #4 = 1480' long, "Leif Erikson"
- Gaps between the lids range from 600 to 1100 feet.
- The lids provide open space and access to lakefront where there was none before.
- Historic lakefront district was preserved.
- Each lid has different landscapes and art that uses culture and history in the designs.
- Rose Garden on Leif Erikson has a fountain, gazebo and over 2000 roses.
- Other lids have lots of trees and shrubs (with 6 to 8 feet of soil).
- A major arterial runs atop the lid to maintain an important crosstown link.



Lake Place Park on lid, with "Great Stairs" connecting to Lakewalk.

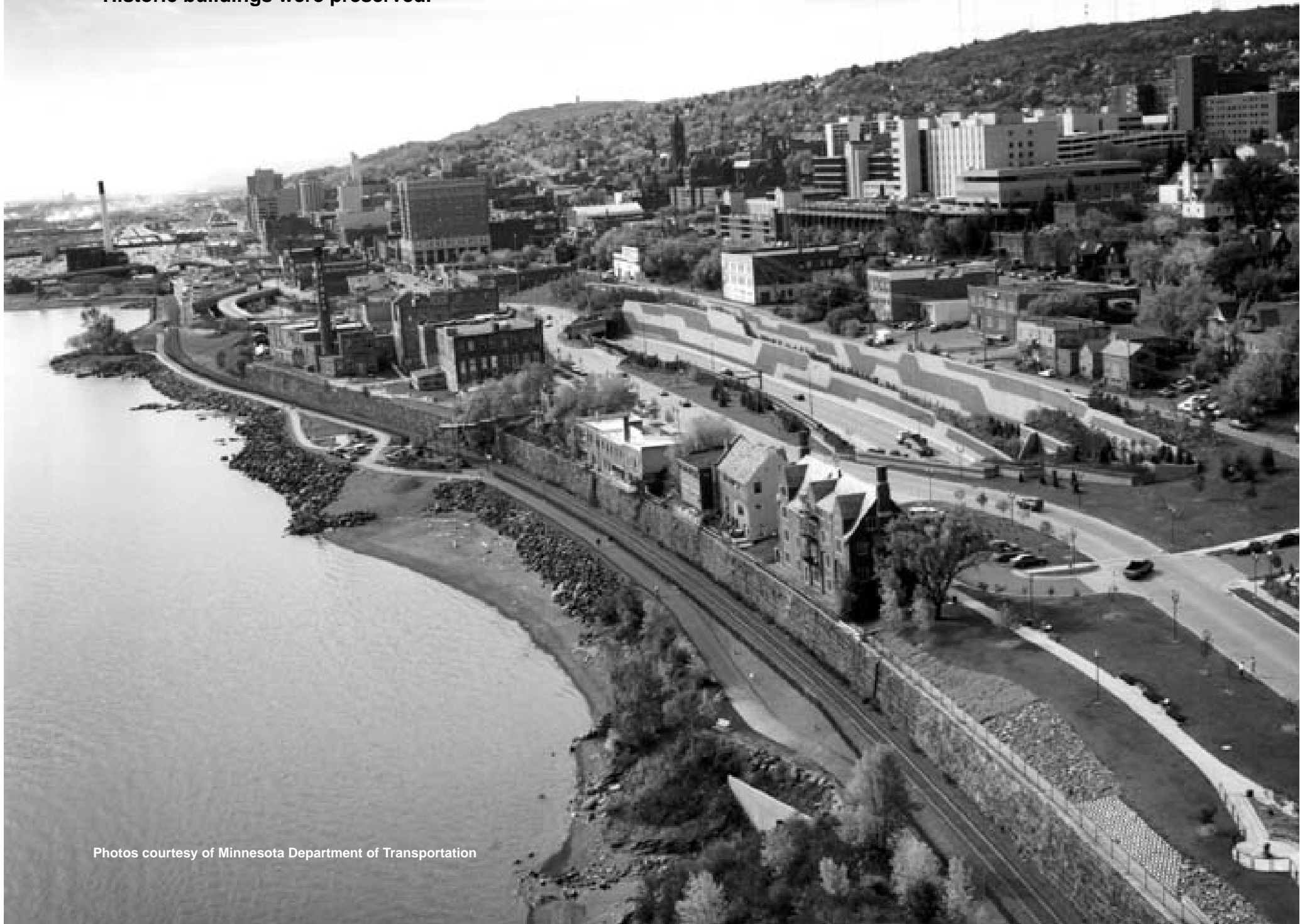


Rose Garden's historic horse watering fountain. I-35 is directly below.

East tunnel during construction: note historic district along shoreline and the historic Sir Benedict's's Pub near the retaining wall.



**Duluth lids: East tunnel after construction.  
Historic buildings were preserved.**



Photos courtesy of Minnesota Department of Transportation

## LOCATOR MAP

This map shows locations within the SR 520 corridor where lids may be considered.



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*Construction Bulletin*, January 19, 1990, Vol. 229, No. 3, pps.16-33.

Morse, Mary, "Rainbow at the End of the Highway", *Lake Superior Magazine*, Aug/Sept 1992, pp. 47-55.

The Big Dig website for a virtual tour and information about Boston's  
"Central Artery/Tunnel Project": [www.bigdig.com](http://www.bigdig.com)

Chapter 8: I-70 Capping, Town of Vail: [civil.colorado.edu/web/course/courseware/cven3602/8.I70\\_capping.pdf](http://civil.colorado.edu/web/course/courseware/cven3602/8.I70_capping.pdf)



# Landscape Art

Why add art?

Because public art has the power to transform daily experience. It does this by pulling us out of ourselves and inviting us to **LOOK**. Art helps us to focus, remember, celebrate, orient and find our way, recognize thresholds and gateways. Art can frame views, explain and interpret, commemorate and surprise.

Art objects and their placement can work at two levels—the low-speed, detailed level and the high-speed, large-scale level. For the pedestrian, who travels slowly, art can have more detail for closer study and depth of interest. For the motorist, who travels fast, art should have large features that can be seen from a distance and studied as one approaches. Since the entire distance of the corridor can be covered in a short time by vehicle, the motorist can integrate and appreciate a corridor aesthetic or theme that visually unifies the route.

Success in selecting and placing public art is a result of clearly defined goals, thorough understanding of the context, good communication among stakeholders, and a well-defined process. What type of art is chosen and where it is placed ultimately depend on close collaboration and consensus among communities, public agencies, artists and designers. The earlier the collaboration and dialogue begin, the better the chances for a successful project.

This chapter's maps are an exploration of where and what kind of art might be placed in the SR 520 corridor. Each node on the map represents a particular type of landscape art opportunity—viewing, educational, and so on, as shown on the following page. The locations chosen are based on imagining what sort of art might work in a particular physical setting. The imaginings are just that — conceptual, speculative, and playful. Hopefully they will inspire discussion and collaboration.



Street light dragon in Seattle's International District



Fremont Troll



Fremont Bridge and Rapunzel



Juanita Beach bridge detail



Totem by Montlake Cut at MOHAI

# Examples

## Art Purpose and Description



### View

Focus attention on a special or significant feature or view.



### Commemorate

Tribute to a person, event or place that has meaning to community.



### Gateway

Celebrate community entrance or identify thresholds.



### Wayfinding

Indicate directions or identify locations.



### Screen

Hide or buffer something.



### Treasure

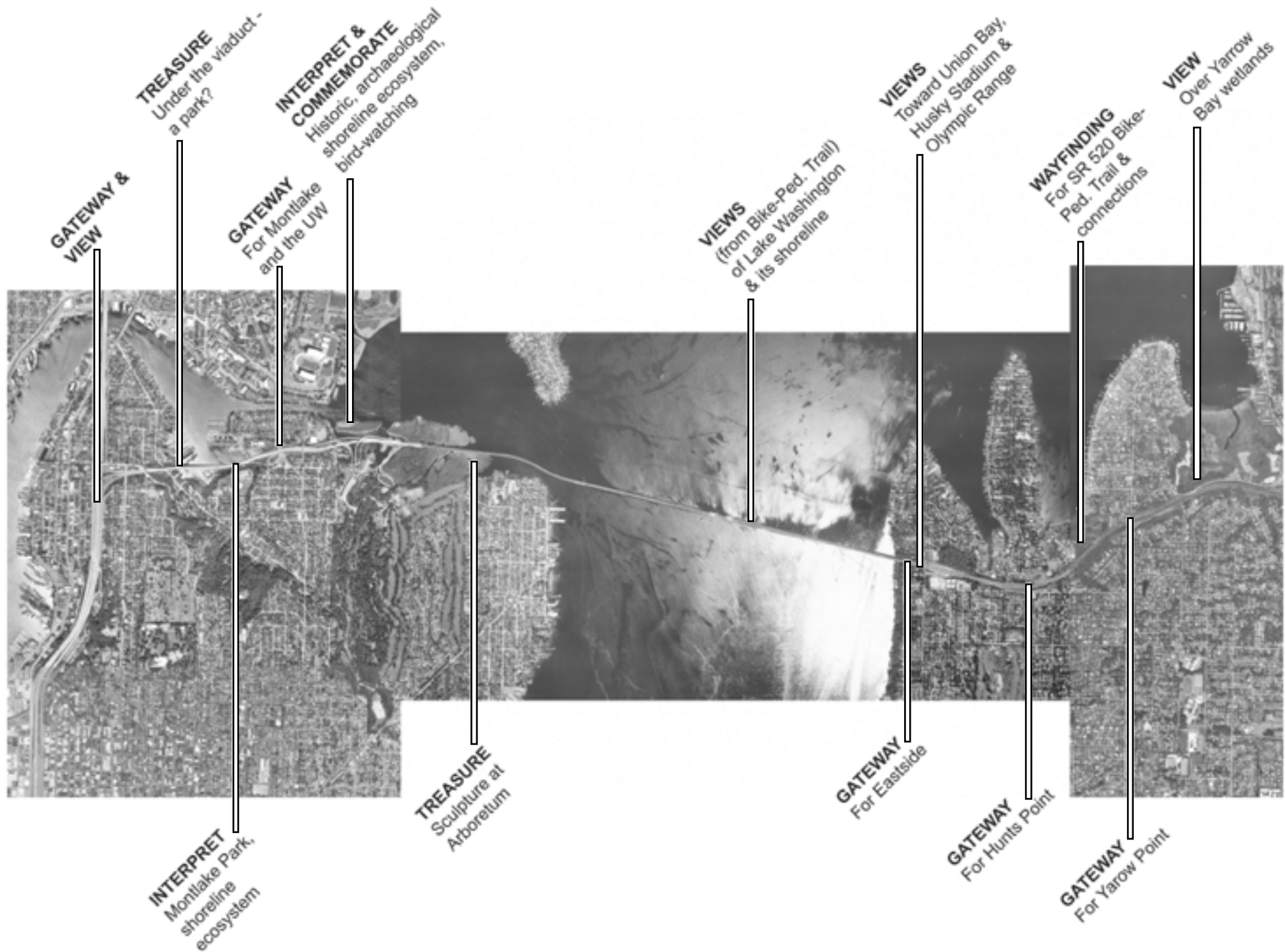
Surprise element that is special to a place.



### Inform

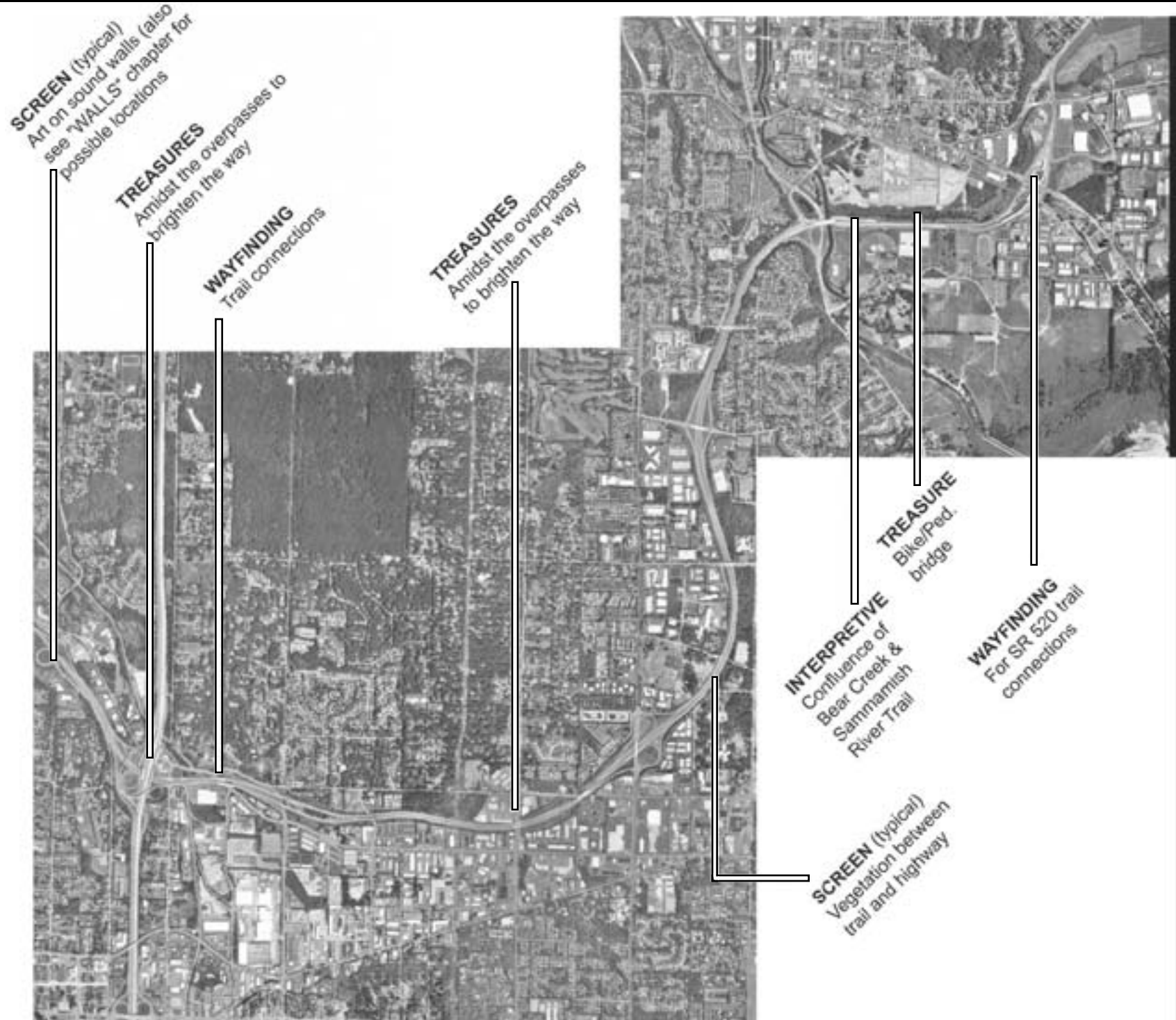
Interpretive and educational signs or displays.

## *Ideas for landscape art along SR 520 through Seattle and Points area*



# *Ideas for landscape art along SR 520 through the Bellevue-Redmond area*

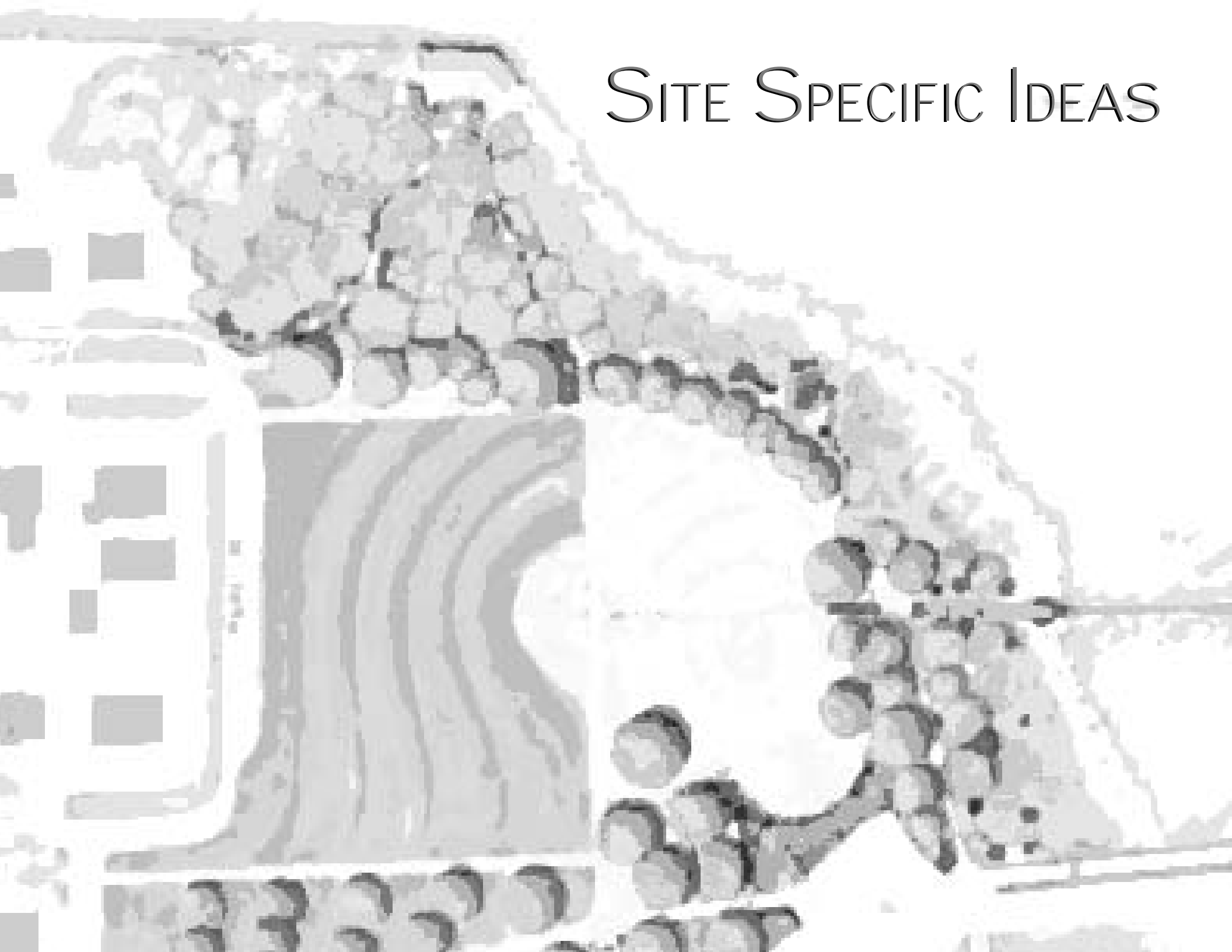
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# SITE SPECIFIC IDEAS

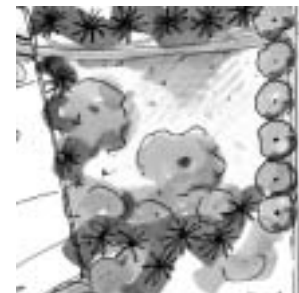




Within the SR 520 corridor there are many interchanges and parcels of land that could become special, enhanced landscapes. For this workbook we have imagined how three places in particular could be enhanced:

- *I-5 to Delmar Drive* ..... lidded portion on west side
- *Museum of History and Industry* ..... open space/park
- *92nd Avenue NE* ..... lidded portion on east side

The go-ahead for any of these enhancements would depend on many factors, of course, including intensive involvement from all stakeholders. This workbook offers these speculations to show that there are many ways to use public places.



## LOCATOR MAP

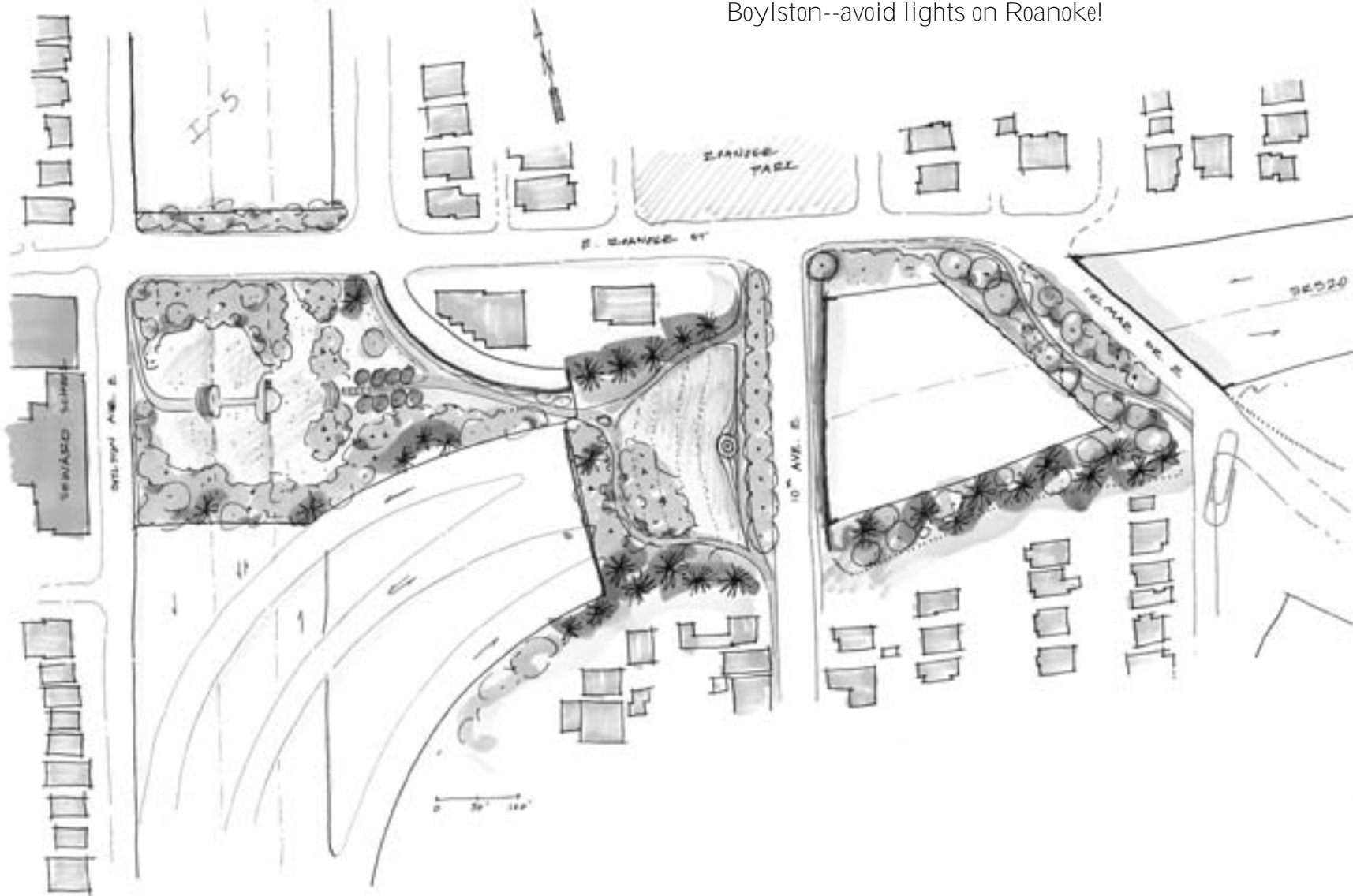
The three sites used for the “Possible Landscapes” are shown below.



# Eastlake-Roanoke Neighborhoods idea for a public space

Lid over I-5 and SR 520 ramps

- Terraced lids (3) over I-5 lanes
- Semiformal landscape with lots of walking trails, lawn areas, landscaping
- Gathering places and areas for unstructured play
- Bike-pedestrian connection between 10th and Boylston--avoid lights on Roanoke!



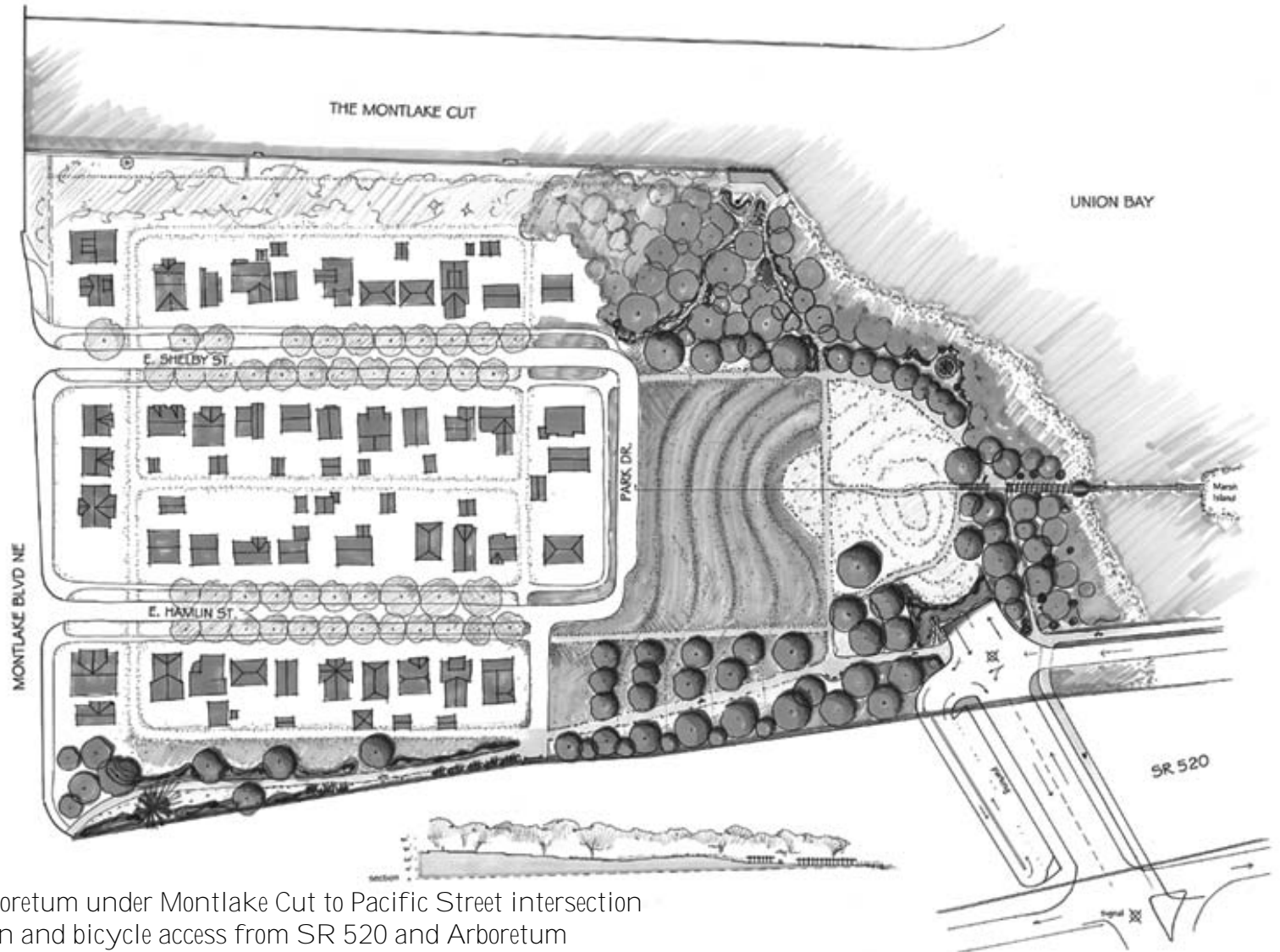
# Eastlake-Roanoke Neighborhoods idea for a greenbelt

## Lid between Delmar Dr. and 10th Avenue

- Extends greenbelt along Interlaken to connect with Roanoke Park
- Potential for paved walking/jogging trails
- Bike-pedestrian trail passes under 10th and connects to Boylston
- Roanoke bridge widened for landscaping



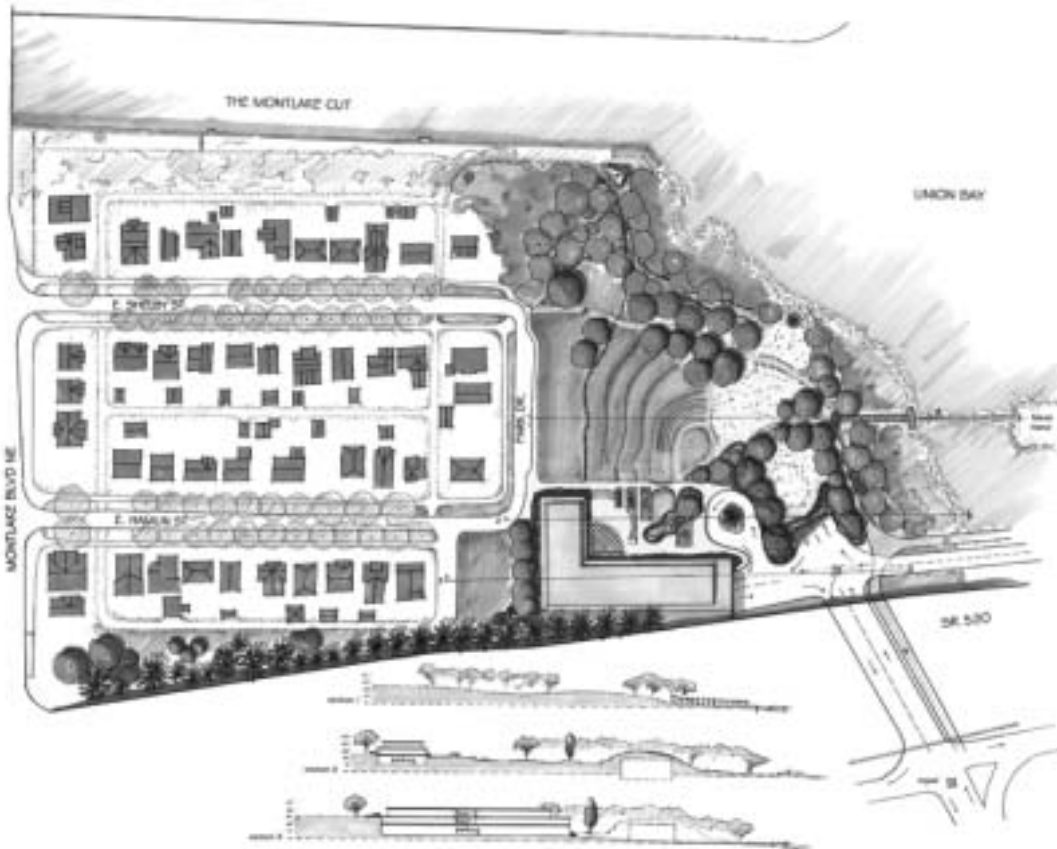
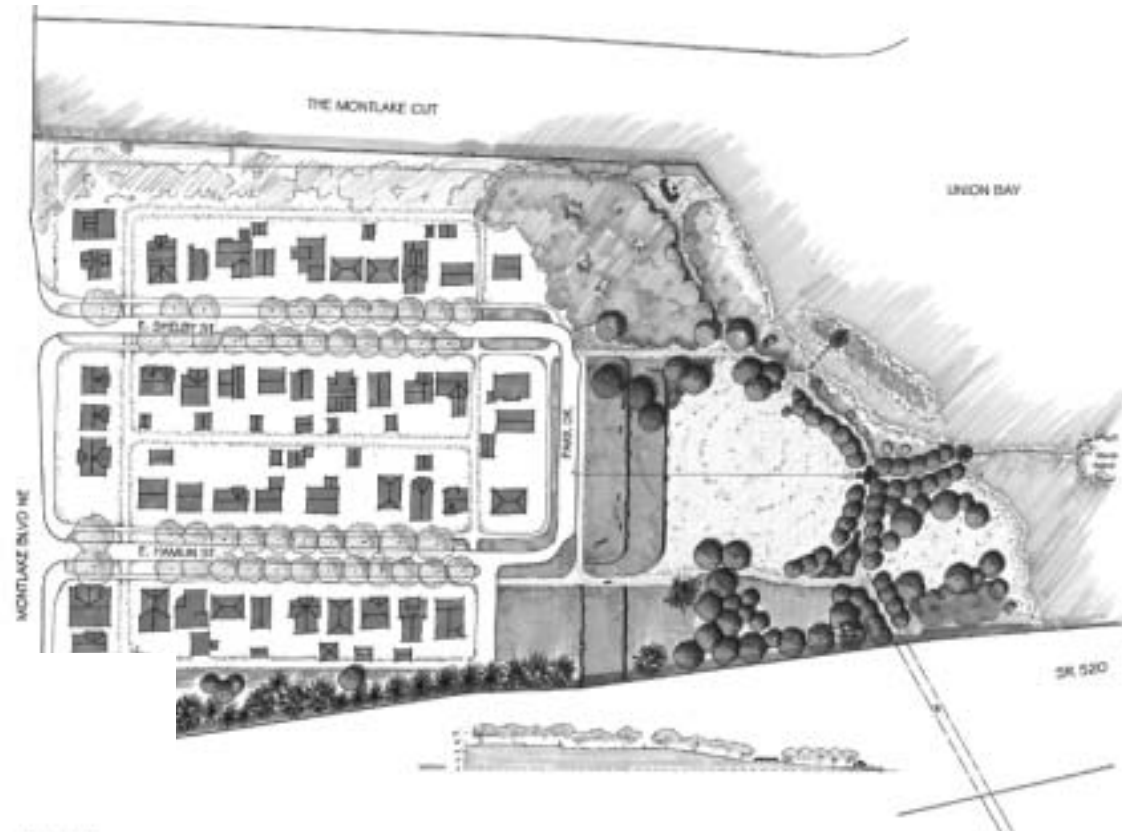
# Museum of History and Industry idea for a park-amphitheater



- Tunnel from Arboretum under Montlake Cut to Pacific Street intersection
- Vehicle, pedestrian and bicycle access from SR 520 and Arboretum
- Parking under SR 520
- Lawn amphitheater for sitting, views, and unstructured play
- Small meadow surrounded by shoreline woods
- Pergola path to small deck at boardwalk with signs and benches
- Bird-watching tower

## Museum of History and Industry idea for a meadow-park

- Inspired by existing site conditions:
  - Lawn terraces act as extension of neighborhood yards
  - Wooded shoreline
  - Meadow-like open area
- Bicycle and pedestrian access only from Arboretum
- Lawn terraces for viewing lake Washington and play area
- Open meadow surrounded by woods
- Wooded shoreline enhanced for habitat with native shrubs and trees
- Pavilion at crossroads and tree-lined path to gazebo at boardwalk



## Museum of History and Industry idea for a public building

- Tunnel from Arboretum under Montlake Cut to Pacific Street intersection
- Vehicle, pedestrian and bicycle access from SR 520 and Arboretum
- One or two-story public building with parking under the building and drop-off loop
- Demonstration gardens, fountain/pool, small amphitheater
- Building plaza opens onto lawn amphitheater, meadow and woodlands
- Opportunities for interpretive and education displays

# Points Communities

## idea for community open space

Lid at 92nd Avenue NE

- Natural, unstructured landscape
- Walking/jogging trails
- Possible par cours
- Connects greenbelt on south side of SR 520 to Wetherill



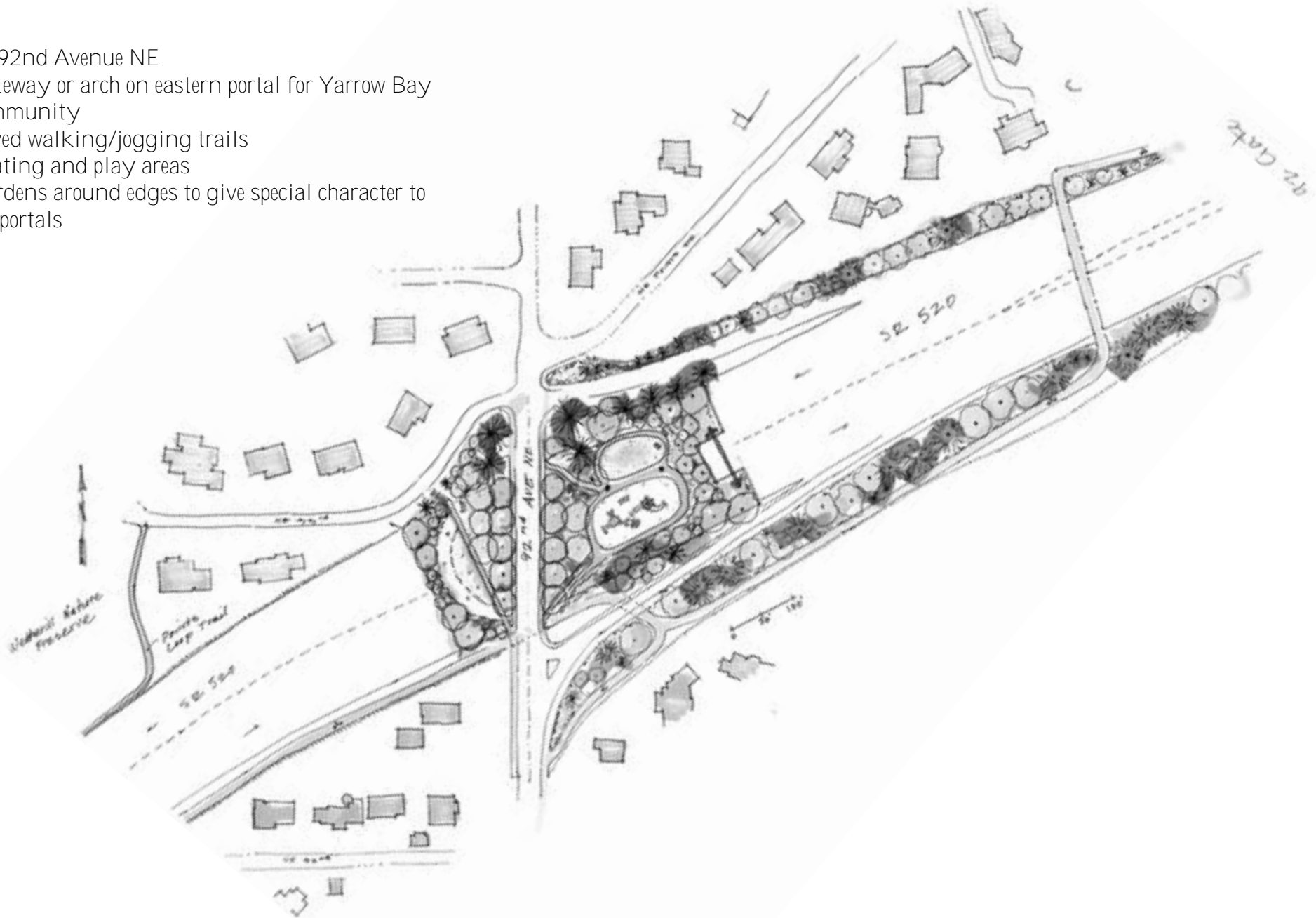
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# Points Communities idea for a community gateway

Lid at 92nd Avenue NE

- Gateway or arch on eastern portal for Yarrow Bay community
- Paved walking/jogging trails
- Seating and play areas
- Gardens around edges to give special character to lid portals





CREATING A LIVABLE CORRIDOR  
*ideas for SR 520*  
**TRANS-LAKE WASHINGTON PROJECT**

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